# Technical Requirements

## for VentureVortex.com v2.0 Establish

prepared for

VentureVortex

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Groundsw ll

## *Executive Summary*

The Technical Requirements are a technical perspective of the general needs for the success of the project. These should be analyzed alongside the business and functional requirements and as such are not granular recommendations but higher-level considerations.

These specifications are for the current project as defined in the Statement of Work. All quantities within this document were derived from business requirements and functional limitations of the components assumed to play a role in the project. All quantities are set at the limitation of the bottleneck of a process, not the average capabilities of the systems involved in a process. Therefore the quantities described within are not maximum or minimum characteristics of every system in the project but of one particular system for each process.

This document and all information contained within therefore are not meant to denote restrictions for future phases of the site. Whereas the project will be architect to allow for future growth this document describes the limitations of the current project.

Within this document the word 'user' refers to any public user of the site, i.e. any user other than administrators of the site.

Areas of Consideration:

- Concurrent Usage
- Performance
- Capacity
- Usability
- Scalability
- Availability
- Security
- Compatibility
- Integration
- Back-up & Recovery
- Disaster Recovery

*Concurrent Usage*

Concurrent usage is the number of users that are expected to perform an action on the system simultaneously. All portions of the application must support this number of concurrent users. This also is an assessment of the needs of the site at this time and for this phase. Further growth would require a reassessment of the system.

We currently anticipate that up to 2,000 concurrent users will be able to use the site at this time. This includes usage of eRooms, the Business Plan Rating System and the Dashboard views.

*Performance*

Performance is defined as the time processes take to complete. Normally this is measured by the time a typical user would experience and not the actual time of the system. Note that these times assume that the connection and systems outside the realm of influence of the project are normal and reliable.

| Connection Speed | HTML Pages | CFM Pages | CFM w/ eRoom Pages | eRoom Pages |
|---|---|---|---|---|
| T1 (768K) | 2.0 sec | 3.0 sec | 4.0 sec | 5.0 sec |
| DSL (384K) | 3.0 sec | 4.0 sec | 5.0 sec | 5.0 sec |
| Modem (56K) | 5.0 sec | 5.0 sec | 7.0 sec | 7.0 sec |

*Capacity*

Capacity is the amount of user information and other data that the system can store. This only includes information pertaining to the system and not historical data such as web server log files or data warehouses.

The system should be able to support up to 50,000 users. Up to 5,000 eRooms should be supported and each eRoom should be able to store 20 megabytes of information (no quota system is available in eRoom).

*Usability*

Usability is defined as the user's ability to access the information and functionality provided by the system. User interface can range from simple anchors to complex navigational structures to interactive tools. While usability is handled by user interface engineers and visual designers, technical engineers normally require specific elements to be included.

The site should incorporate a navigational system that allows users to access all facets of functionality. Users should be able to access all applications whether in Coldfusion, eRoom or any other system. The Dashboard views will provide summaries of information contained within these systems as well as dynamic content.

*Scalability*

Scalability is defined as the ability for the system to grow to meet future user needs. There is normally a limit at which the current system will need to be upgraded to a more robust infrastructure. However up to this limit the system should be able to scale using additional hardware or software packages.

All Coldfusion applications will be coded to be fully compatible with clustering and load-balancing as provided by Coldfusion. All databases will reside in an RDBMS such as Microsoft SQL Server that is expandable and a proven record of high-capacity functionality. All third-party packages such as eRooms will support scalability on a single server.

*Availability*

Availability is the percentage of total time that the site should be fully available. While 100% availability is optimum in real-world conditions this is impractical. Also at some point the law of diminishing returns applies and causes improvements in availability to become more costly than the gains.

The site should be available 99.9% of the time. This interpolates to the following matrix:

| Availability | Downtime Per Year |
|---|---|
| 99% | 87 hours, 36 minutes |
| 99.5% | 43 hours, 48 minutes |
| 99.9% | 8 hours 30 minutes |
| 99.95% | 4 hours, 23 minutes |
| 99.99% | 53 minutes |
| 99.999% | 5 minutes |

This figure will be achieved by a plan submitted by the hosting provider.

*Redundancy*

Redundancy is defined as having multiple instances of a component available at all times so that if one component fails, other component(s) will still perform the functionality. Redundancy can be achieved from both a hardware and software level. Redundancy is normally a very expensive attribute of a project because it requires not only multiple instances of components but multiple upgrades and maintanence.

The site will not have any custom redundancy. All redundancy will be handled by the hosting provider.

*Security*

Security relates not only to access to the system itself but to the data stored within it. Security can be achieved through both technology and work processes. Technology such as transmission encryption, passwords, public key infrastructure, firewalls and data encryption can be utilized. Work processes such as password confidentiality, premises and other offline attributes can affect any online security processes.

Security is crucial for this project due to the sensitive nature of the data on the site. Protocol transmission will be encrypted via the 128-bit SSL protocol thereby protecting all data in transfer between the browser and the server. Access to the server will be restricted via a username and password; this is a compromise between security needs and ease-of-use. Data on the system will all be stored within a secure database which will be accessible only via a limited number of accounts. These accounts will be utilized by the application and any manual administration only.

*Compatibility*

Compatibility is the conformance of the system to existing and upcoming industry standards such as HTML, XML, SQL, etc. These standard protocols and data formats allow the system to communicate with other systems at the present time and in the future. This also includes any client software such as browsers that access the system.

The site will not have any external stubs for other applications to access. All data will be stored in a standard RDBMS and all data calls will be written in standard SQL. All custom user interface elements will be written to produce HTML and possibly DHTML.

All HTML will conform to the W3C's HTML 4.01 specification as defined on their website www.w3c.org. All client-side JavaScript will conform to Netscape's JavaScript 1.3 specification as defined on their website www.netscape.com.

No allowance will be made for any browser-specific inconsistencies with the specifications listed above. Any issues that result from browser inconsistencies are not covered.

*Integration*

Integration is defined as the relationship between this project's application(s) and any other applications. Other applications could include legacy mainframe systems, transaction-based systems, ERP systems, CRM systems, fulfillment systems or custom applications.

No integration with any existing systems is required. All existing information, applications and assets will be transferred to the new site thereby eliminating the need for integration with the existing site.

*Back-up & Recovery*

Back-up & Recovery is the processes that are used to archive the software portion of the system for restoration and historical uses. Normally a backup device is used to store all data and the software itself. Any information such as log files that are not needed for operations but are necessary for historical data analysis are normally moved to an offline storage site.

The site will have a full daily backup of all software and data; this includes both the code itself and the database(s). All backups will be available for a full restoration of the site within 4 hours. All log files will be stored in on- or offline storage for at least 3 months before permanent removal. The client will always have the option of archiving the data themselves at their own cost.

All backup and recovery responsibilities for each system rest on the administrator of said system. Therefore if the client administers a system they are responsible for the backup and recovery.

*Disaster Recovery*

Disaster recovery is the ability to restore the site in the event that the entire system infrastructure including hardware and facilities is temporarily or permanently disabled.

A full disaster recovery plan will be made available to the client by the hosting provider. This will include a backup location for hosting with comparable services as the primary location and a transmission plan for all backups and data that were made. The time frame that will be required for a full transfer will also be provided.

## *Supporting Documents*

| Subject | Document Title | Location |
|---|---|---|
| Requirements | Business Process Flow | Portal |